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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,796	06/27/2003	Ronald D. Javor	ITL.1808US (P16081)	6501
47795	7590	06/19/2009	EXAMINER	
TROP, PRUNER & HU, P.C. 1616 S. VOSS RD., SUITE 750 HOUSTON, TX 77057-2631			LU, ZHIYU	
			ART UNIT	PAPER NUMBER
			2618	
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			06/19/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/607,796	<b>Applicant(s)</b> JAVOR ET AL.	
	<b>Examiner</b> ZHIYU LU	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-9,14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-9,14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2618

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1 and 14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 8, 14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai et al. (US6731920) in view of Hirota (US20030022637).

Regarding claim 1, Iwai et al. teach a cellular telephone, comprising:

a first cellular telephone antenna (Antenna 2 of Fig. 2) to receive a signal from a source;  
a second cellular telephone antenna (Antenna 3 of Fig. 2) to receive a signal from the same source as the first antenna; and

a device (22 of Fig. 2) coupled to said first and second cellular telephone antennas to use the signals from the same source as detected by the first and second cellular telephone antennas to reduce interference, said first cellular telephone antenna being an omni-directional radio frequency antenna having a non-directive radiation pattern (whip antenna) and said second

Art Unit: 2618

cellular telephone antenna is a radio frequency directive antenna having a directive radiation pattern (planar antenna).

But, Iwai et al. do not expressly disclose said first and second antennas being radio frequency antennas, said second cellular telephone antenna being separated from the first cellular telephone antenna by at least two centimeters.

Hirota teaches having diversity antennas to be separated apart by more than two centimeters (paragraph 0045).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Iwai et al. into having diversity antennas separated by more than two centimeters taught by Hirota, in order to avoid electromagnetic field interference from each other.

Regarding claim 14, Iwai et al. and Hirota teach a method as explained in response to claim 1 above.

Regarding claim 8, Iwai et al. and Hirota teach the limitation of claim 1.

Iwai et al. teach wherein the first cellular telephone antenna receives a first radio frequency signal and the second antenna receives a second radio frequency signal that is not correlated to the first signal and further comprising a baseband logic circuit adapted to process the first radio frequency signal and the second radio frequency signal to provide interference detection and

Art Unit: 2618

cancellation (column 5 line 43 to column 6 line 67).

Regarding claim 16, Iwai et al. and Hirota teach the limitation of claim 14.

Iwai et al. teach receiving the first signal from an omni-directional antenna having a non-directive radiation pattern (antenna 2 of Fig. 2).

Regarding claims 3 and 17, Iwai et al. and Hirota teach the limitations of claims 1 and 16.

Iwai et al. teach wherein the first cellular telephone antenna being a whip antenna (antenna 2 of Fig. 2).

Regarding claim 18, Iwai et al. and Hirota teach the limitation of claim 14.

Iwai et al. teach receiving the second signal from a directive antenna having a directive radiation pattern (different antennas of Fig. 2).

Regarding claims 4 and 19, Iwai et al. and Hirota teach the limitations of claims 1 and 18.

Iwai et al. teach wherein the second cellular telephone antenna being a microstrip patch antenna (antenna 3 of Fig. 2).

3. Claims 6-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai et al. (US6731920) in view of Hirota (US20030022637) and Iwamatsu et al. (US2003/0045313).

Regarding claim 6, Iwai et al. and Hirota teach the limitation of claim 1.

Art Unit: 2618

But, Iwai et al. and Hirota do not expressly disclose wherein said device includes a first receiver that is a direct conversion receiver and a second receiver that is a direct conversion receiver.

Iwamatsu et al. teach a mobile station having two direct conversion receivers with diversity combining feature (Fig. 4, paragraph 0003).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate having two direct conversion receivers taught by Iwamatsu et al. into the apparatus of Iwai et al. and Hirota, in order to receive independent conversion.

Regarding claim 7, Iwai et al., Hirota, and Iwamatsu et al. teach the limitation of claim 6.

Iwai et al., Hirota, and Iwamatsu et al. teach a baseband processor (10/21 of Fig. 2 of Iwai et al.) coupled to the first receiver and the second receiver (Fig 4 of Iwamatsu et al.).

Regarding claim 9, Iwai et al., Hirota, and Iwamatsu et al. teach the limitation of claim 6.

Iwai et al., Hirota, and Iwamatsu et al. teach the first receiver is adapted to down convert a first signal from the first antenna and wherein the second receiver is adapted to down convert a second signal from the second antenna (receiving is as down converting from independent antenna).

Art Unit: 2618

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu  
Examiner  
Art Unit 2618

Zhiyu Lu  
June 9, 2009

/Duc Nguyen/  
Supervisory Patent Examiner, Art Unit 2618